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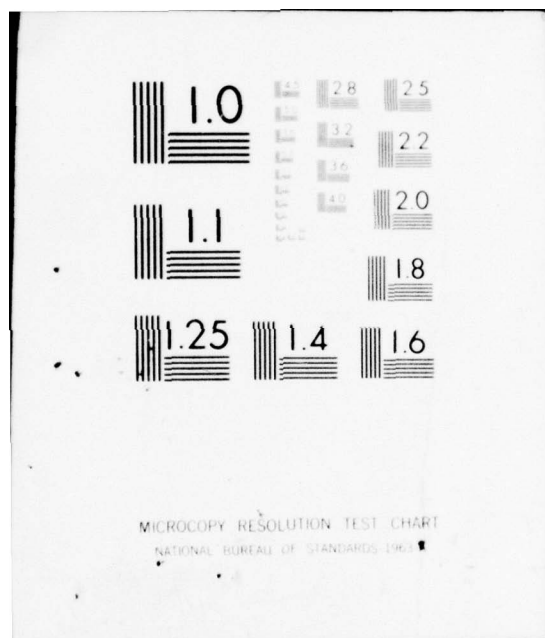
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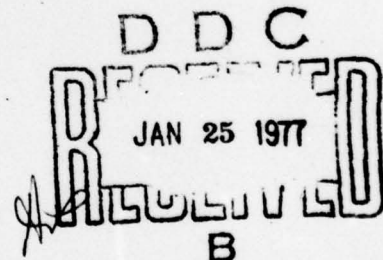
THE  
OBJECTIVE MEASUREMENT  
OF  
PREJUDICE  
AND  
DISCRIMINATION

FINAL REPORT

Prepared by

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The programmed case method (Dailey, 1966) is explored and extended as a technique for measuring interference with interpersonal learn- ing defined as prejudice. Black and white participants (both low and high SES) judged 4 low-SES and 4 high-SES programmed cases de- scribed as "black" or "white." Learning interference effects were found in the cases as functions of both race and SES. The implica- tions of the results for mechanisms of prejudice and for the use of the programmed case in related research are discussed.		



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## TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
METHOD	6
RESULTS	15
DISCUSSION	26
CONCLUSION	30
REFERENCES	31

## INTRODUCTION

The definition of the word, "prejudice," falls basically onto three conceptual dimensions:

- (1) prejudice as injury or damage resulting from the behavior of another;
- (2) prejudice as an irrational attitude or hostility directed against others;
- (3) prejudice as a preconceived judgment or opinion.

Today, emphasis on prejudice as behavior commands the greatest concern from activists in the social sciences, and certainly from policy-makers in government. After all, discrimination on the basis of race, sex, or ethnicity is prejudice made overt. Pettigrew (1964) wrote eloquently about the effects of discrimination on the role and personality of the black in America. Most of the psychological research in this area, however, has concentrated on the cognitive and attitudinal aspects of prejudice. From the roots of psychoanalytic theory have grown the studies of the authoritarian personality (Adorno, et al., 1950) and anti-semitism (Simmel, 1946). Allport (1958), too, has discussed prejudice in terms of its fulfilling an ego need in those who hold biased attitudes toward others. Harding, Kutner, Proshansky, and Chien (1954), on the other hand, described prejudice as misinformation which leads to deficiencies in reasoning with regard to others. This emphasis on the cognitive aspects of prejudice, as opposed to the more emotional components of attitudes regarding prejudice, is continued in the present research.

Behavioral scientists have recognized for years the inconsistencies between attitudes and behavior (cf., Katz, 1960). With regard to prejudice, the problem is double-edged. Allport (1958) remarked that often the people who come from communities that are hotbeds of prejudice express attitudes that clearly conflict with their behavior. However, it is also quite possible that the reverse is true--that people who express a prejudice in a context-free attitude survey may not behave negatively at all toward others in their day-to-day dealings (e.g., Saenger and Gilbert, 1950).



The approach to defining prejudice that was advocated by Harding and his associates is particularly appealing in this regard, because it links prejudiced behavior to the inaccurate processing of information, a measurable concept, rather than to the presence of an attitude which may not be measurable. Cantril (1957) demonstrated this phenomenon at the level of visual perception, and showed that one's preconceptions actively interfered with how his subjects processed visual information, and the misperceptions were clearly quantifiable. Also, from a theoretical standpoint, inaccurate information processing, if it does occur as a function of prejudice, occupies an intermediate position in the causal link between attitudes and behavior and thus may be more predictive of actual discrimination.

This report summarizes the research carried out to investigate prejudice as interpersonal learning interference. The technology that is introduced to demonstrate this phenomenon is that of programmed case learning. Programmed instruction, a technique introduced by Skinner (1954), is designed to provide feedback on responses at specified steps in the learning process. In order to study how clinical inferences are made, Dailey (1966) began experimenting with what he called the "programmed case", a clinical history of a person put into a programmed learning format. In the programmed case, the task of the judge is to get to know a person from the information that is given to him; the feedback at each stage in the process serves as an incentive to do so. Interference with the learning process should be measurable as a function of certain prejudicial information being systematically introduced to the case. The current phase of our research effort was designed to test the viability of the programmed case method as a measure of prejudice: does a person's prejudgment of an individual result in an interference with learning about that individual, and can this learning interference be measured with the programmed case technology?

A typical programmed case format, as described by Dailey (1971), consists of a sequence of information: (1) initial facts about the person, such as demographic information; (2) three events, of which only one is true of the person in the case, and among which the judge must choose as the most likely for that person; (3) the correct event, presented as feedback to confirm or disprove the judge's prediction. This sequence is continued.

throughout the case. The events in the case may be presented in chronological order so that causal attributes can be inferred as information by the judge as he progresses through the case.

Recent research has demonstrated the utility of the programmed case as a learning tool. Fancher (1966) sought to use the technique as a measure of accuracy in person perception, to be related to personality variables. DeWaele (1971) programmed the cases of a number of Belgian juvenile delinquents for studies of criminal behavior prediction. Both of those investigators developed cases of between 35 and 50 episodes; DeWaele, in addition, provided extensive information to his judges about the family background, heritage, and socioeconomic status at the beginning of his cases. The first direct application of the programmed case method to a study of prejudice was undertaken by Barron (1973), who found that introducing a "black set" to certain cases reduced the ability of high school seniors to make accurate predictions of the behavior of the persons in those cases. Even though Barron's cases contained only 15 episodes, the reported effect of prejudicial information upon case learning was significant.

The present study focuses on two variables--race and socioeconomic status (SES)--to examine the effect of prejudice on programmed case learning. These variables are related by Bogardus' (1928) notion of social distance: the further away one person is from another in terms of social distance, status, or rank, the more likely his processing of information about that other person will be hampered by prejudgment. Thus, if a white man judges a case about a black man, all else being equal, he should learn the case less well than if he were to judge a programmed case about a white man; similarly, a black man reading a white case should have the analogous difficulty relative to his performance on a "black" case. The same relationship should also hold true for individuals whose SES differs from that of the person in the programmed case: interference with case learning should increase as the social distance based on SES difference increases between the judge and the person in the case.

Alternative hypotheses are also possible. A study by Tajfel (1969) found that prejudiced persons were more likely to correctly identify Jews from photographs than a non-prejudiced control group. On the surface, this result seems to suggest that prejudice might in fact lead



to more accurate case predictions. However, the Tajfel finding is the result of the judges having already learned certain information about the distinctive facial features of members of a particular ethnic group, rather than the effect of processing new information. Prejudice, as its definition has been narrowed in the context of this report, cannot be functional in the sense that it facilitates perceptual accuracy. Nevertheless, it may be functional, indeed, for members of a lower-ranked group in terms of social distance to get to know about members of a higher-ranked group if the former group aspires to a higher status. The alternative hypothesis, then, is not for a facilitative effect of prejudice, but rather a lesser learning interference effect for judges of lower status (blacks or low-SES judges) than for judges of higher status in the processing of information in programmed cases about socially distant people.

In addition to case learning, we wished to examine other phenomena regarding case predictions that might reflect some other by-products of prejudice. For example, are prejudiced persons more dogmatic about their predictions than others? If this were true, we should expect that such persons would typically assign higher subjective probabilities to the accuracy of their predictions of behavior in the case, especially during the first episodes of the programmed case. Also, the degree of liking a judge holds for the person in a programmed case may also be a negative function of prejudice, but in this instance we would predict that liking would decrease as a judge progressed through the case of a person against whom he was predisposed.

The general design of the study was to develop 8 programmed cases, half of which would be drawn from people of low-SES origin and half of which would be drawn from people of high-SES origin. Though the informants (the people whose life histories are programmed into cases) could be both white and black, the racial identification of the cases would be disguised so that one group of judges could be told that the cases were "white" and another group could be told that the cases were "black," though the cases would otherwise be identical. White and black male subjects from different SES categories (determined by present occupation) would be asked to serve as judges for groups of four programmed cases: (1) "black," low-SES origin, (2) "white," low-SES origin, (3) "black," high-SES

origin, and (4) "white," high-SES origin.<sup>1</sup>

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<sup>1</sup>Though ultimately this research will include women in the programmed cases and explore the prejudicial effects of sex difference, the relatively greater ease of recruiting black and white men, rather than women, to serve as judges and informants, dictated our use of them during this first phase.

## METHOD

### Development of the Programmed Cases

*Collection of Critical Incidents.* Each programmed case, based on the life history of a particular individual, would consist of a series of critical incidents, chronologically ordered, to be drawn from each major period in the informant's life. A "critical incident" was defined as a life event that was of relatively major importance to the informant, whether it was clearly viewed as a success experience, a failure experience, or merely a particularly memorable experience in which the informant actively participated. Events that merely happened to the person, resulting in purely reactive experiences, generally did not qualify as critical incidents by themselves, unless they were accompanied by some reactive behavior. In addition, a critical incident was defined as a behavioral event that occurred over a brief period of time (a few days at most), though the background of the event, which might cover an extensive timeframe, could be specified in great detail. By defining a life history in terms of specific behavioral events, it was hoped that interpretation of the incidents by the informant, and the perceptual distortions of memory that occur with time, could be minimized.

As a rule, each critical incident that was to comprise a programmed case was expected to respond to the following questions:

- (a) What were the events leading up to the incident?
- (b) Who were the people involved?
- (c) What happened?
- (d) How did the informant respond to the situation?
- (e) How did the informant feel about what happened?
- (f) What was the end result?

These questions were provided as guidelines for response, as probes to elicit specific memories, and as standards that could be applied to maintain comparability of critical incidents across cases.



Informants for the study were recruited in a number of ways, including newspaper advertisements, personal contact, and correspondence with civic and church groups. All informants were apprised of the nature of the study, and they agreed to allow the release of programmed cases based on their lives provided that the cases would be written in such a way as to disguise the identity of the informant. A payment of \$20 was made to each participant, regardless of whether or not his life history was programmable.

Previous efforts involving over 30 participants had shown us that the collection of personal case history data could not be accomplished by having the informant write out a series of life incidents that were in some way critical to his life. Even when the informants were prompted by monitors to respond specifically to the response guidelines, the incidents that were elicited were usually vague, incomplete, and highly interpretive rather than descriptive. In addition, putting the incidents into written form proved to be an onerous chore for the informants, which accounts in great part for the brevity and lack of detail characteristic of nearly all the incidents. This method of data collection, initially appealing because of its seeming economy of effort, proved to be entirely worthless for the present purposes.

The next technique that was tried to collect the personal life history data was the one-on-one interview. Trained interviewers were employed to extract the critical incidents from 8 informants after the informants had filled out a "Hi-Lo Questionnaire" which served to elicit high and low points in the lives of the participants year by year. The interviewers used the questionnaire information to probe for critical incidents, and this technique worked with some success. Nevertheless, the data collected using this approach did not appear to be usable in constructing a programmed case, since about half of the incidents, though they followed the guidelines to the letter, were not sufficiently detailed to permit their programmability. What finally became clear to all concerned was that the interviewer should be a person with a working knowledge of the programmed case technology. This should enable him to probe for background information that would link two or more critical incidents, elicit sufficient detail to flesh out a programmed written episode, and provide enough other information to serve as the basis for distractors, or the "false" incidents that would be written up along with the "true" critical incidents in the programmed case.

Accordingly, the author was recruited to interview an additional 11 informants, 4 of whom were black and 7 of whom were white. Eight of these informants, 5 white and 3 black, ages 26 to 38, provided enough personal information about critical behavioral events in their lives to enable the programming of cases 21 incidents in length.

*Theory of the case and the creation of distractors.* The programmed case format consists of a series of critical incidents, each incident accompanied by a set of distractors, or descriptions of alternative fictitious events. In order for the case to be a viable learning experience, and thus be a vehicle for demonstrating the hypothesized interference of prejudice with learning, the true critical incidents must be linked in some way such that learning what actually occurred at an early point in the case will facilitate the correct choice of an event at a later point. Vague, subjective notions of consistency of the events within a case have often been used in the past for the programming of cases, with the result that it is rarely possible to know exactly what is learned from such a programmed case. For the present study, a more formal approach was adopted. Each of the informants was categorized according to the motivational characteristics expressed in terms of what was actually said during the interviews. The definitions of three patterns of motivation described by Atkinson (1958)--the needs for achievement, affiliation, and power--served as the guide for this characterization process.

The critical incidents to be programmed were selected for both their conformance to the informant's pattern of motivation concerns and their providing of insight into the moral character of the informant. The combination of these criteria resulted in a set of critical incidents having complex consistent interrelationships and a high degree of originality. The use of a motivational framework in case construction rather than a mere descriptive consistency among incidents avoided a major pitfall which was characteristic of many earlier programmed case efforts: cases which exhibit only surface consistency tend to be stereotypic visions of the person in the case. Rather than requiring the case reader to develop hypotheses about the underlying causes of behavior, the previous approach to programmed case construction invited the reader to conclude that the informant was "the kind of a person who would do certain things"--a prejudiced view. The motives of need for achievement, affiliation, and power, on the other hand, show consistency among behaviors which appear



inconsistent on the surface. The underlying motives surrounding the causes and prediction of behavior, presumably what the case reader should be learning, are what DeWaele (1971) meant when he spoke of the "theory of the case."

Once the motivation patterns of the informant had been identified and the critical incidents had been written as case episodes, the preparation of distractors proceeded. For each true episode, three distractors were written that were based either on the surface content of the true episode or on the period in time during which the true episode occurred. The motivational framework of the case was used in distractor preparation: one distractor was generated which was motivationally consistent with the true episode, though the behavior described did not occur, and the two remaining distractors were developed so as to be inconsistent with the motivation pattern underlying the case. This procedure permitted the scaling of responses to programmed case episodes, such that the case reader could be given full credit for choosing the correct episode, partial credit for choosing the motivationally consistent distractor, and no credit for choosing either of the motivationally inconsistent distractors.

Figure 1 presents two forms of examples of a critical incident and three distractors from programmed cases used in this study. Each of the possible episodes is identified by a letter. The judge, after having circled a letter to indicate his choice of the correct episode, would turn the page to reveal the true episode and then proceed to read the succeeding episode. This process is repeated throughout the case. In the example of Form (a), alternative D is the true episode, alternative B is false but motivationally consistent with the informant's life, and the other two alternatives are both false and motivationally inconsistent. In the example of Form (b), alternative C is the true episode, alternative B is false but consistent, and the other two are both false and inconsistent.

FIGURE 1

Sample Programmed Case Episodes

Form (a)

CHOOSE THE TRUE EPISODE

- A When Lloyd was in fourth grade he ran around with a group of friends from school. He didn't particularly like playing basketball with them but he did enjoy doing other things--visiting each other's houses, hanging around, going for ice cream. By dinnertime Lloyd usually had had enough companionship for one day. After dinner when his homework was finished, Lloyd liked watching T.V. with his family.
- B The kids in Lloyd's neighborhood liked to play the usual games--cowboys and Indians, pitching baseball cards, basketball--and once in a while got into some mischief as 10-year-old kids will do. But Lloyd always knew that he and the other kids could count on a spanking from their parents if they did anything really wrong. Lloyd was one of the more well-behaved boys for his age at school.
- C Lloyd joined a group of tough neighborhood kids who operated at night. Though they were all in the fifth or sixth grade, most of them were on record as juvenile delinquents. After supper they would get together and plan what to do that night. Sometimes they would shop-lift from a store; sometimes they would set a cat on fire. It all seemed like great fun at the time.
- D At age 10 Lloyd was involved with a neighborhood youth gang. The kids would sometimes get into trouble, and some eventually got sent to reform school. But when Lloyd had a choice between throwing a rock through a store window and playing baseball, he always chose the baseball. But if the other guys wanted to throw a rock, Lloyd wouldn't condemn them for it.

FIGURE 1 (continued)

Form (b)

Dennis found himself hospitalized with chest pains. Without any close friends, Pamela had always felt lonely with Dennis working nights. And now the anxiety over Dennis' health only added to her disquiet. Gradually, Pamela began relying on a close family friend, Jim, for moral support.

CHOOSE THE TRUE EPISODE

- A Lying in a hospital bed for so long, Dennis had become suspicious of Jim and Pam. But when he came home, he couldn't confront Pam with his fears. Instead, Dennis kept it inside and became more and more sullen at home.
- B Dennis was sure Pam had been cheating on him. If not with Jim, it would probably have been someone else. One night Dennis made a terrible scene. After exchanging accusations with Pam, Dennis walked out on her.
- C Although he didn't think Pam capable of infidelity, Dennis didn't know how involved she really was. At first, hoping for a confession, Dennis fabricated a story about bugging the home phone. However, when the explanations she offered didn't satisfy him, Dennis actually did bug the telephone.
- D Dennis felt lucky that Jim had been around to help Pam. He was glad they could be such good friends. In the future, Dennis planned to spend more time with Pam.



### Judges

Participants for the study were recruited from various sources. The majority responded to newspaper advertisements that offered \$4.00 per hour for participation in a "life history exercise." The remainder of the judges came from seminars held by a member of the McBer staff for the New York State Office of Minority Business Enterprise and for Harvard University's Efficacy Program for minority students. One hundred and two white male participants were recruited, 61 from high-SES and 41 from low-SES groups. Fifty-one black male participants were recruited, 35 from high-SES and 16 from low-SES groups.<sup>2</sup>

### Procedure

Most of the judges participated in group case rating sessions, and with few exceptions the groups were made up of either all white or all black participants. After the group had been seated in the laboratory, each judge was given a packet containing a cover sheet and four programmed cases which he was to read. The cover sheet required the participant to fill out his name, age, race, education, and present (or previous) occupation. The reverse side of the cover sheet contained instructions on how to read the cases. Judges were told that, for each of the 21 sets of episodes in each case, they would circle the letter corresponding to the episode that they thought was the most likely to have happened to the person described in the case. They were also told that they would be required to estimate how sure they were that their choice of episode was correct

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<sup>2</sup>The number of black participants was somewhat less than the investigator had hoped for. Our experience with recruiting black participants for psychological research in this study has shown us that (1) blacks as a group are extremely sensitive about being tested and/or surveyed, and their wariness makes them reluctant to participate in more so-called "research;" (2) \$4.00 an hour for only a few hours is very little incentive for blacks to leave their home community so that they can be tested under controlled conditions. It is strongly suggested that future work on prejudice against women and minorities be conducted on controlled samples to whom the investigator can have ready access (e.g., officers and enlisted personnel in the U.S. Navy).

(from 0% to 100%), and also to say how much they liked the person in the case, based on the episode that they chose for him (on a scale ranging from 0 ["dislike"] to 8 ["like"])).

The cover sheet on each programmed case contained some background information (name, age, and sex) and some potentially prejudicial information (race and occupation) about the informant. Half the judges received cases that described people from relatively poor socioeconomic background (low SES) and half received cases describing people from middle-class backgrounds (high SES). The cases within each group of four that the judges received were disguised as either all black or all white. Thus, each packet of cases fell into one cell of a between-judges factorial of race of case (white/black) by SES of case (high/low). The packets were given to the judges at random, but care was taken to insure that participants seated next to each other did not receive cases of the same race or SES. The cases within each packet were also randomly ordered.

After the participants had read the instructions, they were guided through the first episode of the first case in the packet. The judges read the first set of episodes from that case, circled the answers most likely to them, and rated their certainty of correct response as well as how much they liked the person in the case. They were then told to turn the page, to read the correct episode, and to continue to the next series of episodes. The median time required for completing the four cases was approximately 3 hours. As each participant completed all the cases in his packet he was handed a 40-question posttest, containing 10 multiple-choice questions (4 choice categories) about each of the programmed cases he had read. Five of the questions on each case tested for memory of particular incidents in the case; the remainder of the questions were designed to test for memory of personality characteristics of the case. The questionnaire was presented after all four cases had been read in order that (1) participants would not be sensitized to the fact that they would be tested for recall, so that a measure of incidental learning could be obtained, and (2) the combined posttest could reflect the ability of the subjects to separate the four cases in their minds.



### Data Analysis

Basic statistics (means and standard deviations) were computed on each of four dependent variables for each case: Accuracy (correct episodes were given a score of 1; motivationally-consistent but false episodes were given a score of  $\frac{1}{2}$ ; and episodes that were both inconsistent and false were scored 0.), Certainty (how sure the judge was that his choice of episode was correct), Likability (how much the judge liked the person in the case based on the episodes chosen), and Posttest Score. Case difficulty was computed based on Accuracy scores from judges that received cases which were described as being of the same race and occupation categories as themselves. Having determined that none of these measures were significantly skewed, analyses of variance were conducted on the measures of Accuracy, Certainty and Likability for the following designs:

- (1) Race of Judge (White/Black) x Race of Case (White/Black) x Judges (nested within the previous factors) x Case Difficulty (4 levels) x Episode Blocks (Episodes 1-7/Episodes 8-14/Episodes 15-21)
- (2) SES of Judge, based on occupation (Low SES/High SES) x SES of Case (Low/High) x Judges (nested within the previous factors) x Case Difficulty x Episode Blocks.

In addition, the above analyses were repeated on the Post-test Score measure, with the exception that the Episode Blocks factor was dropped. In all of the analyses of variance, age and education level of the judge were entered as covariates.<sup>3</sup>

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<sup>3</sup>In our original design, it was hoped that it would be possible to combine analyses (1) and (2) into a single analysis of variance design. Unfortunately, the number of judges that were recruited was too small to allow a sufficient representation of judges in each cell of the between-judges factorial, and thereby give sufficient power to this design.

## RESULTS

This section focuses separately on three sets of relationships in the data: those among the characteristics of the judges and the dependent variables, those among the level of case difficulty, the effect of episode blocks, and the dependent variables, and those between the characteristics of the judges and the properties of the programmed cases within dependent variables. The third set of relationships, to be presented last, impinges most directly on the hypotheses regarding the mechanism of prejudice.

### Relationships among characteristics of the judges and the dependent variables.

Table 1 illustrates the significant correlations among the dependent variables and the independent variables (age, race, and education level) that define the characteristics of the judges. Regarding the stability of the dependent variables, all of the correlations significant at the .01 level are significant beyond the .05 level across at least 6 of the 8 programmed cases.

Accuracy appears to be unrelated to the judges' age, race, or level of education; the mean correlation between accuracy and these variables was  $+.06$ , far below significance. Accuracy was positively related to Certainty, but the strength of the relationships was not high. Nevertheless, this cut at the data suggests that the hypothesized negative relationship between Accuracy and dogmatism, as measured by Certainty, has not been borne out. Though judges differed considerably in their ability to predict episodes in the programmed cases, individual judges were consistent in their ability to predict from case to case: reliability across programmed cases was  $.85$ , based on four programmed cases per judge.

Regarding the other dependent measures, judges were generally more certain that their responses were correct when they expressed greater liking for the persons in the cases. Posttest scores, however, were negatively related to both Certainty and Likability, suggesting that judges were more apt to remember facts about the cases if they were either relatively unsure of the accuracy of their responses or were unfavorably disposed toward the cases. Interestingly, judges who had a higher level of education,

TABLE 1

Independent x Dependent Variables:  
Significant Intercorrelations

Independent Variables	Age	Race	Education	Accuracy	Certainty	Likability	Posttest
Age							
Race	•						
Education	-.168	•					
Dependent Variables							
Accuracy							
Certainty	•	•	-.280*	.186			
Likability	.255*	•	-.215*	•	.467*		
Posttest	-.227*	•	.466*	•	-.222*	-.218	

All correlations:  $p < .05$ , except \* =  $p < .01$

Note: Correlations with Age are controlled for Education; correlations with Education are controlled for age.



though they were no more accurate than other judges, scored higher on the posttest than the others, but they also tended to feel less certain that their choices were correct and to express less liking toward the person in the case. Older judges, by contrast, liked the persons in the cases more, though they did less well in the Posttest measure of memory.

Relationships among case difficulty, the effect of episode blocks and the dependent variables.

In examining programmed case learning at a preliminary level, that is, without regard to the possible interactive effects of race and SES of the judge and the race and SES of the case, our attention is focused on differences in overall difficulty among cases, and the consistencies among cases across episode blocks. As noted in the Method section, relative case difficulty was determined by examining the Accuracy scores of judges whose race and SES matched the race and SES origin of the programmed cases. The programmed cases within SES groups were accordingly rated from 1 to 4, 4 being the highest level of difficulty. Cases of high and low SES origin were found to be equally difficult ( $F < 1$ ). Also, though the difficulty level of these programmed cases is high, the cases used by Fancher (1966) were of the same approximate difficulty.

Table 2 shows the effects of case difficulty on the dependent variables. Accuracy, somewhat confounded by the way the measure of difficulty was derived, shows a significant inverse relationship to difficulty level ( $F = 20.34$ ,  $df = 1/425$ ,  $p < .001$ ). Though no linear effects were found for the dependent measure of Certainty, Likability ratings also decreased with case difficulty ( $F = 16.14$ ,  $df = 1/425$ ,  $p < .001$ ). Posttest scores did not vary with case difficulty, and, as they were more a function of the incidental characteristics of the cases, rather than the SES or race of case distinctions, these scores are not included in the Tables.

The linear main effect of episode blocks on the dependent variables was consistent for Certainty and Likability; these data are found in Table 3. Certainty, subjectively rated, reliably increased as the judge progressed through the programmed cases ( $F = 8.71$ ,  $df = 1/283$ ,  $p < .001$ ). Likability, however, reliably decreased with progress through the cases ( $F = 16.83$ ,  $df = 1/283$ ,  $p < .001$ ). No main effect was found for the Accuracy measure, though there are higher-order interactions on this measure between episode blocks and a

TABLE 2  
Dependent Variables as a Function  
of  
Case Difficulty

	Level of Case Difficulty			
	1	2	3	4
Accuracy	47.1%	44.2%	42.4%	41.5%
Certainty	51.6%	52.0%	51.6%	51.4%
Likability	5.53	5.39	5.42	5.16

TABLE 3  
Dependent Variables as a Function  
of  
Episode Blocks

	Episode Blocks		
	Block 1	Block 2	Block 3
Accuracy	42.8%	45.2%	43.5%
Certainty	50.5%	51.9%	52.5%
Likability	5.48	5.36	5.28



prejudice-related property of the programmed cases, as will be seen later.

The interactions between case difficulty and episode blocks are shown for the measures of Certainty and Likability in Figures 2 and 3. Both linear-by-linear interactions are significant ( $F=6.35$ ,  $df=1/851$ ,  $p<.02$ , and  $F=28.95$ ,  $df=1/851$ ,  $p<.001$ , respectively). It appears that the easier the case is, the more that Certainty increases over episode blocks; the more difficult the case is, the more that Likability decreases over episode blocks. The finding for Certainty is straightforward, since it would be expected that the increasing amounts of positive feedback that are experienced in judging an easier programmed case would make one feel more confident of correct case predictions. The increasing inverse relation between level of difficulty and Likability over episode blocks may, in fact, be an expression of the judges' frustrations surrounding the "unpredictability" of the persons in the more difficult cases.

Interactions between the judges and the programmed cases.

Simply stated, our major hypothesis was that judges who are socially distant from the programmed cases they are asked to judge should show interference with case learning, relative to judges who are not socially distant from the persons in the cases. In particular, we wished to explore the potentially prejudicial effects of racial and SES differences between the judges and the programmed cases.

It was expected that white judges would learn "white" programmed cases better than "black" cases, and the black judges would learn "black" programmed cases better than "white" cases. The present data support this hypothesis. Table 4 shows this interaction for Accuracy between the race of the judge and the racial identification of the cases. The interaction is significant ( $F=6.06$ ,  $df=1/139$ ,  $p<.02$ ), and this pattern of Accuracy scores was repeated for each of the 8 programmed cases. No main effects were found for either the race of the judge or the race of the case. Since the "white" cases and the "black" cases were identical except for the racial sets that were provided, between judges, on the cover sheets of the programmed cases, we may conclude that prejudice as interference with learning about an individual has been demonstrated. No differential effects of the race variables were found, however,

FIGURE 2

Case Difficulty x Episode Blocks:  
Certainty

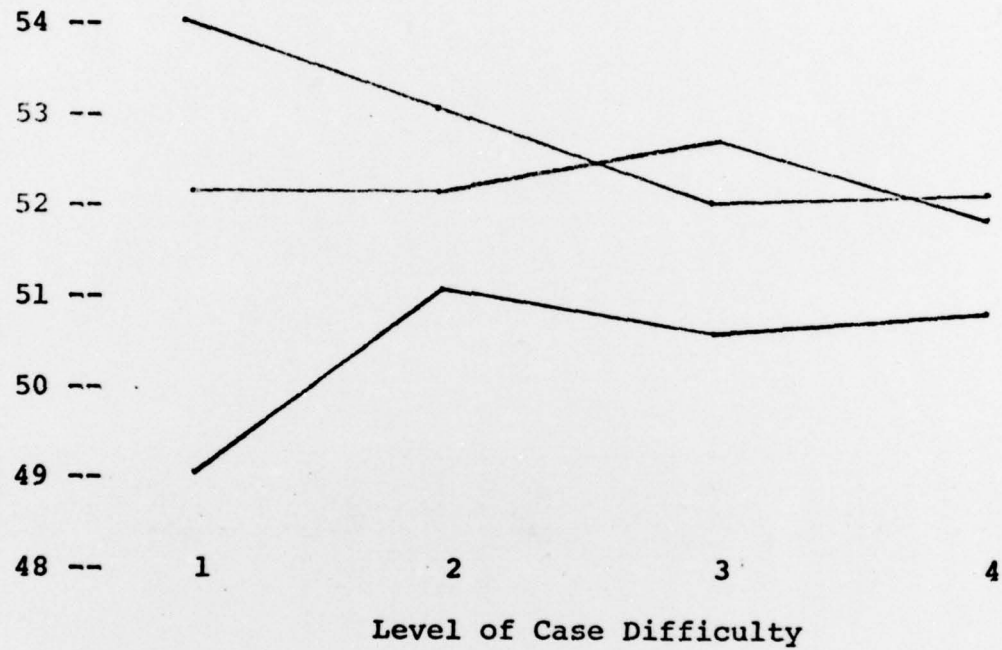


FIGURE 3

Case Difficulty x Episode Blocks:  
Likability

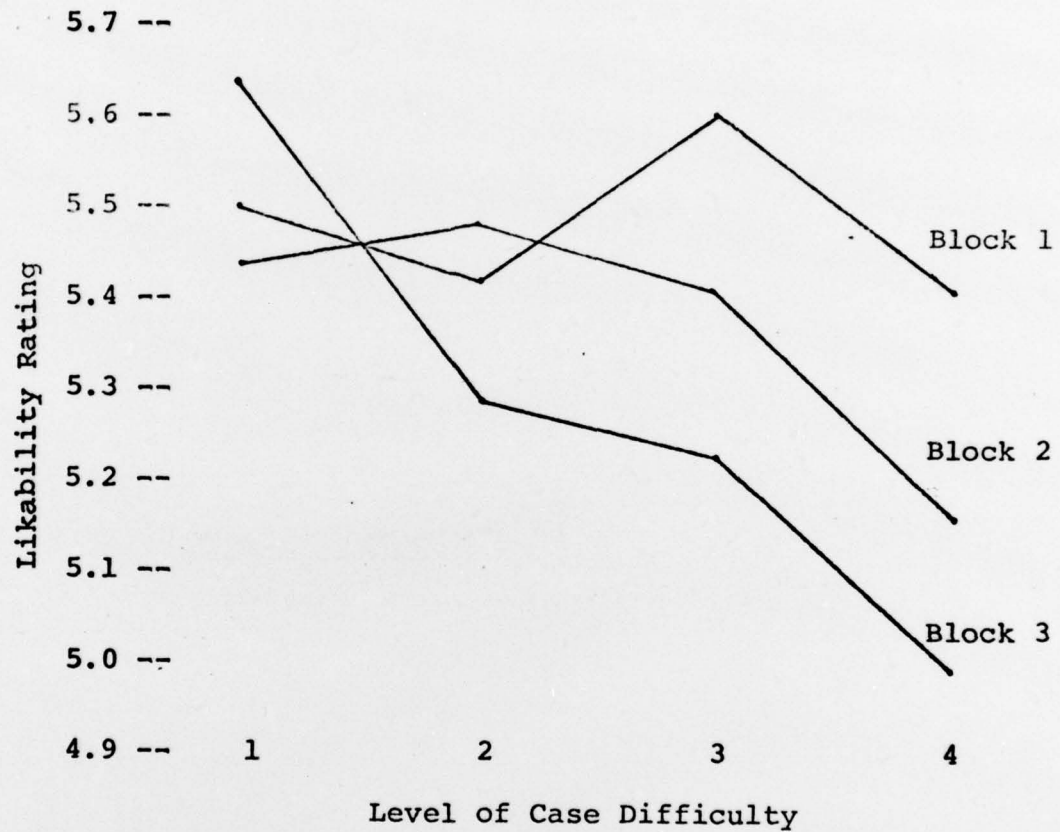




TABLE 4

Race of Judge x Race of Case  
Accuracy

		Race of Case	
Race of Judge	White	White	Black
	Black	43.9%	41.3%
		42.4%	47.6%

for the Posttest scores of memory for the cases, or for the dependent measures of Certainty and Desirability.

Regarding SES differences between the judges and the programmed cases, the results are more complex. Contrary to the findings regarding the interactive effects of race on Accuracy, no reliable interaction obtained between the SES of the judges and the SES origin of the programmed cases. However, when the learning of cases of different SES origins is examined by episode blocks, an interesting learning pattern emerges. As seen in Figure 4, judges correctly predicted the behaviors of the high-SES cases at a linearly-increasing rate across episode blocks, while judges of low-SES cases did not increase their ability to predict behavior over trials. This interaction is highly significant ( $F=14.58$ ,  $df=1/127$ ,  $p<.001$ ).

A concomitant finding regarding the effect of programmed case learning over episode blocks as a function of the SES origin of the case concerns ratings of Likability. Likability of the person in the case increased over episode blocks for high-SES cases, but it decreased over blocks for low-SES cases ( $F=23.48$ ,  $df=1/217$ ,  $p<.001$ ); these data are presented in Figure 5. It appears that here, again, the greater unpredictability of certain cases was inversely related to liking of the persons in those cases.

FIGURE 4

SES of Case x Episode Blocks:  
Accuracy

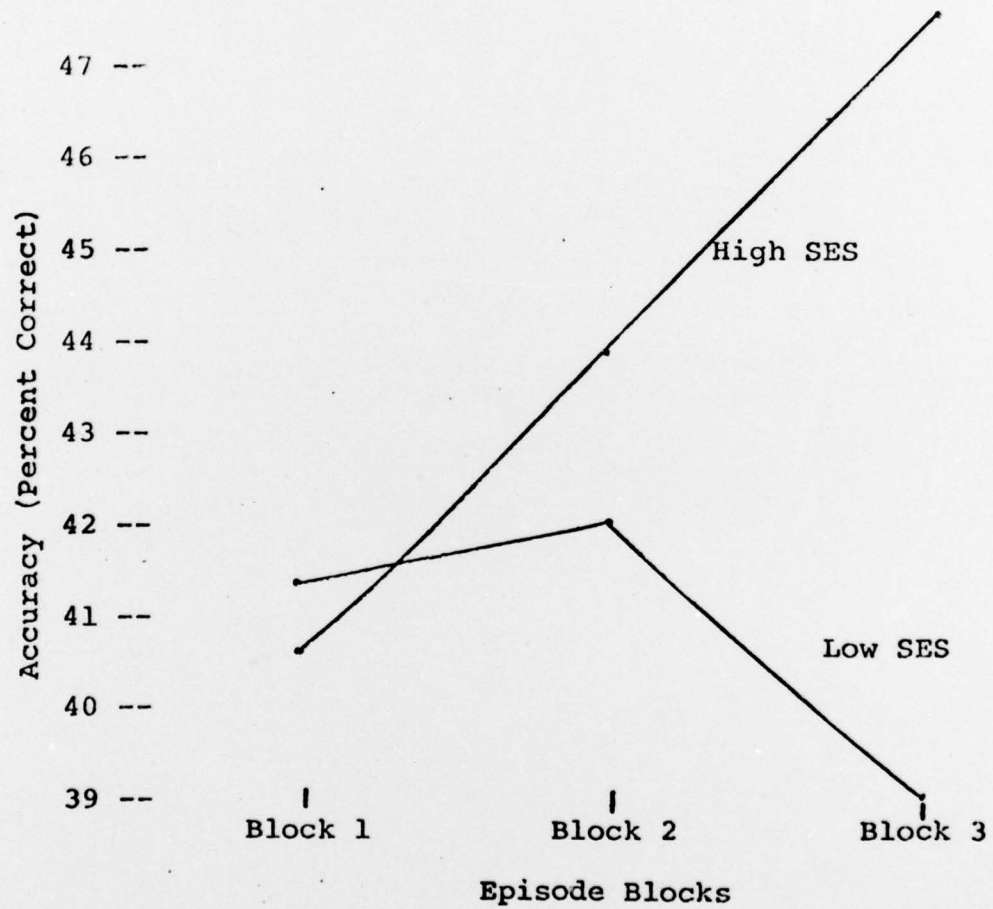
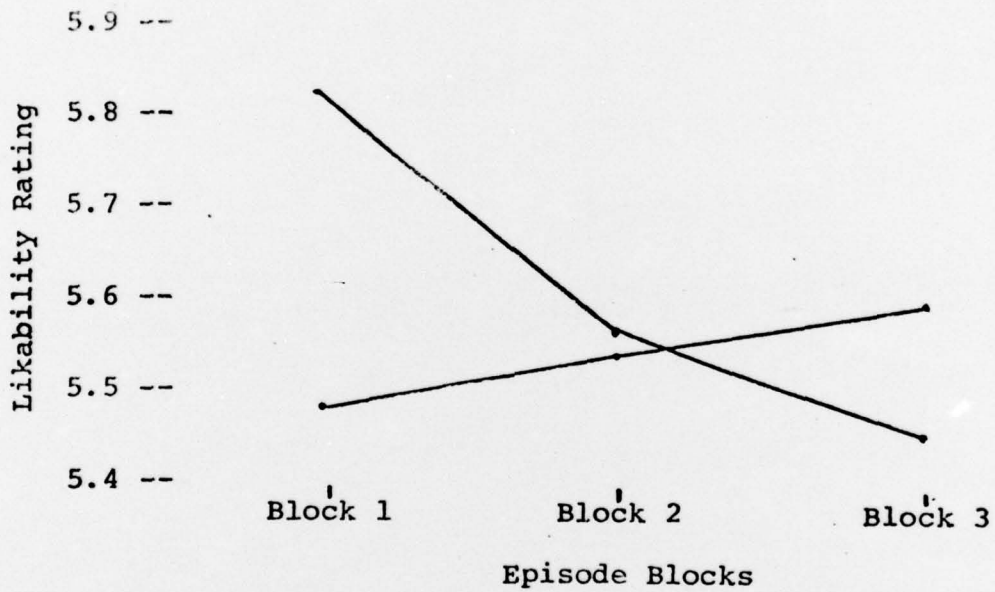




FIGURE 5

SES of Case x Episode Blocks:  
Likability



## DISCUSSION

The findings of this report confirm the utility of the programmed case technology for measuring inaccurate information processing as a function of prejudice. Presenting prejudicial information to the judge--either in the form of racial identification at the beginning of the programmed case or in the form of information about SES as an integral part of the early episodes in the case--resulted in a decrease in learning about the persons in the cases, as measured by predictive accuracy.

The learning curves for individual judges over episode blocks were erratic, but the judges' overall tendency was to learn most efficiently when the cases were written about high-SES persons who were described as of the same race as the judge. The interaction of the race of judge with the race of the programmed case supports and extends Barron's (1973) findings, and confirms the bilateral effects of the "social distance" hypothesis for race. The interaction effect, though stable, appears to be small, and one could not justify measuring racial prejudice with the programmed cases developed for this study solely on the strength of the present data. In order to be more useful as measures of racial prejudice, analyses of the episodes in each case must be undertaken to select those episodes which show the strongest effect of differential race and to discount the others. The first step in the episode analysis procedure has been undertaken: on the average, 10 out of 21 episodes per case show differential patterns of case behavior prediction, all in the direction of the main finding for race ( $\text{Chi-square} > 8.00$ ,  $\text{df} = 3$ ,  $p < .05$ ). Cross validation of the programmed cases, based on careful episode selection for the effects of race, should yield a more powerful measure of the effects of racial prejudice on learning.

The findings of this study that relate to the SES origins of the programmed cases have potentially more profound implications for the mechanisms of prejudice than the data which focus on the race-of-judge by race-of-case interaction. On the average, the judges, regardless of their own SES level, experienced much more interference in their learning of low-SES cases than high-SES cases. The former cases were not designed to be intrinsically more difficult than the latter, but even if they were more difficult, predictive accuracy should have increased over episode blocks as it did with all the high-SES cases. The

cases were equivalent in terms of the informants' success and failure experiences that were programmed as critical incidents; even the number of low-SES informants who could be considered "successful" overall matched the number of high-SES informants who could claim the same. Yet the effect of an informant being typed as "low-SES" was pervasive and pernicious. Even the unilateral "social distance" hypothesis does not explain this finding, since judges of lower SES learn about the socially-distant high-SES cases with less interference than cases to which they themselves are more similar in status.

At least three possible explanations emerge that may shed some light on the process of learning interference for the low-SES programmed cases. For high-SES cases, the environment of the informants may be seen by the judge as relatively favorable; the choices of the person are seen as having a broader range, and the expectancy of greater opportunity, "good" choices, and successful life outcomes are built up in the judge's expectations. A greater allowance for and acceptance of different kinds of behavior on the part of the judges would facilitate the learning of cases, therefore, when they are written about high-SES informants. Low-SES cases, on the other hand, are written about people who may be perceived as having less opportunity and a more unfavorable environment than their higher-status counterparts. This suggests less freedom on the part of the informant to act in such a way as to maximize his life outcomes, and the expectancies on the part of the judge may be more limited in terms of possible incidents that might have occurred in the informant's life. The low-SES informant may break away from the norm and become more successful (as 3 out of 4 informants in the low-SES cases did), but because of the mind-set surrounding the limited opportunity and potential for success of the low-SES informant, such information may not be used by the judge in making future predictions about a case; it may simply make the case appear to be more "unpredictable".

A second interpretation of these results comes from the literature of causal attribution and control. Langer (1973) has reported several experiments dealing with outcomes as a function of attributions of skill to the actor vs. the favorable operation of the laws of chance. Where high-status individuals are involved, favorable outcomes tend to be seen as the result of skill on the part of the actor; where low-status individuals are involved, favor-



able outcomes are usually ascribed to chance. Accordingly, it is entirely possible that judges of a low-SES case attributed favorable outcomes in the case to chance rather than to characteristics of the person in the case, and therefore did not consider this feedback around the informant's behavior as useful in predicting future behavior.

The third explanation for the present findings around the SES differences among programmed cases focuses on the differences among judges as a function of their own SES levels. High-SES judges might follow the social distance model in their acceptance and greater learning of the high-SES cases vs. their prejudice and interference with learning of the low-SES cases. Low-SES judges, however, who would otherwise be equally perceptive about both high- and low-SES cases (according to the notion that it is functional to learn about higher-status persons) might (a) refuse to learn about persons of the same status because because it is simply not functional to do so, or (b) actively deny their own background and prejudge others who share their low status level. Both of these alternatives for low-SES judges should yield the same results for Accuracy in the programmed cases, and therefore would qualify as operational definitions of prejudice, but only the latter alternative could be considered learning interference due to literal prejudice.

A finding that deserves further comment is the result that the measure of memory of the person in the case, derived as the case posttest score, did not vary with the introduction of prejudicial information to the case, whereas accuracy in predicting behavior did. Scoring highly on such measures of recall may reflect "case learning," in the strict sense of the term, but not "case prediction." That is to say, the judge who scores well on a posttest may demonstrate that he has learned what the informants have done, but he may not have learned very much about what the informants are really like or what they are likely to do. It was no surprise that the Posttest measure was highly correlated with education level, but it was surprising, and gratifying, that Accuracy, as a measure of prediction and of "getting to know" another person, was not related to race, age, or level of education. Should the programmed case eventually rise to the status of a "test for prejudice," this last finding would be a characteristic of prime importance: it would uphold the measure as being essentially non-discriminatory.

Individual differences among judges in ability to accurately predict programmed case episodes were much greater than the differences attributable to the effects of prejudice between groups of judges. Nevertheless, the high reliability of the Accuracy measure across cases would allow us, for example, to present two "white" cases and two "black" cases to the same judge; the differences in Accuracy scores between the "white" and the "black" cases, adjusted for case difficulty and the individual's overall ability to predict cases accurately, would yield an individual measure of prejudice as interference with the learning process. This measure would be the basis for a field-test application of the programmed case methodology to examine the relationship between prejudicial learning-interference and observable behavior.

Finally, some recent evidence from another area of our endeavor shows support for the programmed case method as a measure of human relations skills. A pilot study was conducted in our laboratory on a group of eleven trainers of personnel in the area of race relations. The trainers were rated for effectiveness as trainers by two supervisors on a 3-point scale, and each was presented with two of the programmed cases that were used in the present study. The correlation between supervisor-rated effectiveness in human relations skills and Accuracy scores for both programmed cases was  $+0.61$  ( $p < .05$ ); between effectiveness rating and a "learning increase" score, computed as increase in Accuracy in the second and third episode blocks over the first episode block, the correlation was  $+0.93$  ( $p < .001$ ). These preliminary results suggest that the programmed case measures some of the skills and abilities that enable certain individuals to learn about the needs and personality characteristics of other people, and to interact effectively with them. More than this, they suggest that the programmed case, in addition to being a measure of prejudicial learning interference, is foremost a measure of learning about real people, a tacit assumption in this report that has not been supported until now.

## CONCLUSION

The present research study has documented the use of the programmed case technique in the measurement of prejudice. The 8 programmed cases that were developed to test for patterns of learning interference as functions of race and SES variables have been found both reliable and valid. Steps need to be taken to refine these measures, but there is sufficient information in the data already collected to initiate this process. The current findings have suggested additional hypotheses surrounding the phenomenon of prejudicial learning as both learning interference resulting from prejudgment and reduction in the use of information about others. More research is clearly needed to investigate these alternative mechanisms, as the implications of each for prejudicial behavior and remedy may be quite different.

New directions in our research effort that are currently being planned are focused on three major areas. One is the extension of the paradigm to other factors, such as sex, age, and education, that may be potential sources of prejudicial information about a person. A second is toward an explanation of the link between prejudice as interference with interpersonal learning and prejudice as behavior directed against others; studies of behavior both in the laboratory and in the field are anticipated. A third would concentrate on interventions aimed at reducing prejudicial interference with learning, and on the ultimate effects of such interventions on subsequent attitudes and behavior. Within each of these three areas of endeavor, a systematic series of hypotheses about the mechanisms of prejudice would be planned to illuminate the conditions under which information about others is used, not used, or distorted.



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